

20cys281

Os lab work

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```
1. #include <pthread.h>
```

```
#include <stdlib.h>
```

```
#include <stdio.h>
```

```
#include <unistd.h>
```

```
void *printWelcomeMessage(void *names) {
```

```
    sleep(7);
```

```
    char *name = (char *)names;
```

```
    printf("\n[THREAD] Hello, Welcome %s.", name);
```

```
    pthread_exit(NULL);
```

```
}
```

```
int main () {
```

```
    pthread_t threads[15];
```

```
char names[10][15] =  
{ "Amritha", "Praveen", "Saurabh", "Sangeetha", "Lakshmy", "Srinivasan",  
  "Ramaguru"};
```

```
int result;
```

```
for(int i = 0; i < 7; i++ ) {
```

```
    printf("\n[MAIN] Creating thread, %d", i);
```

```
    result = pthread_create(&threads[i], NULL,  
        printWelcomeMessage, (void *)names[i]);
```

```
    if (result) {
```

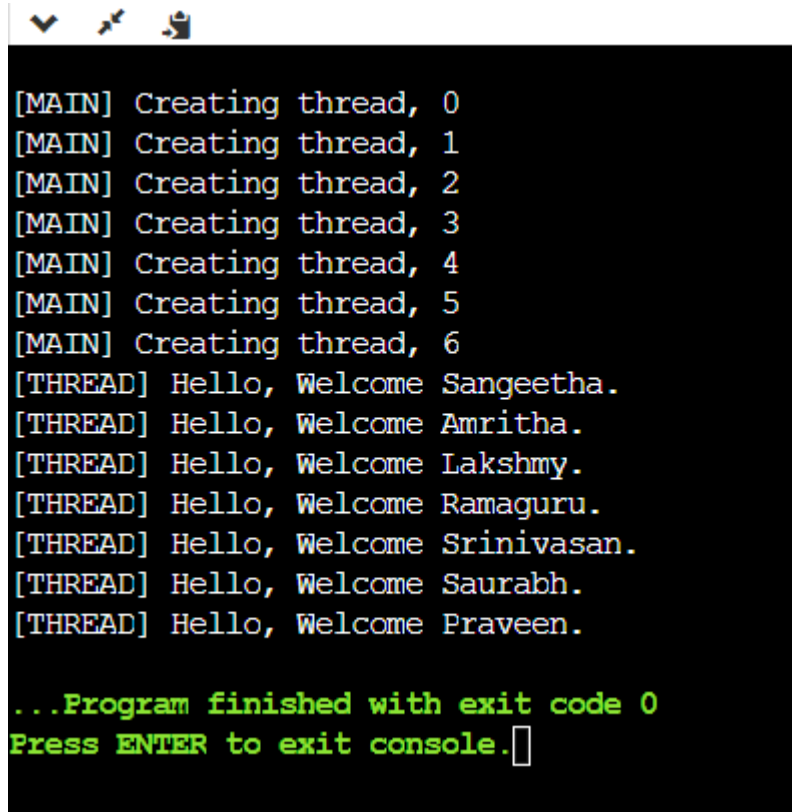
```
        printf("Error in creating thread, %d ", result);
```

```
        exit(-1);
```

```
    }
```

```
}
```

```
pthread_exit(NULL);  
}
```



```
[MAIN] Creating thread, 0  
[MAIN] Creating thread, 1  
[MAIN] Creating thread, 2  
[MAIN] Creating thread, 3  
[MAIN] Creating thread, 4  
[MAIN] Creating thread, 5  
[MAIN] Creating thread, 6  
[THREAD] Hello, Welcome Sangeetha.  
[THREAD] Hello, Welcome Amritha.  
[THREAD] Hello, Welcome Lakshmy.  
[THREAD] Hello, Welcome Ramaguru.  
[THREAD] Hello, Welcome Srinivasan.  
[THREAD] Hello, Welcome Saurabh.  
[THREAD] Hello, Welcome Praveen.  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```

2. #include <pthread.h>

#include <stdlib.h>

#include <stdio.h>

#include <unistd.h>

```
void *printWelcomeMessage(void *threadid) {
```

```
    sleep(10);
```

```
    long tid = (long)threadid;
    printf("\n[THREAD] Hello, Welcome %ld.", tid);
    pthread_exit(NULL);

}

int main () {

    pthread_t threads[7];

    char names[10][15] =
{"Amritha", "Praveen", "Saurabh", "Sangeetha", "Lakshmy", "Srinivasan",
"Ramaguru"};

    int result;

    for(int i = 0; i < 7; i++ ) {

        printf("\n[MAIN] Creating thread, %d", i);

        result = pthread_create(&threads[i], NULL,
printWelcomeMessage, (void *)&threads[i]);
```

```
    if (result) {  
  
        printf("Error in creating thread, %d ", result);  
        exit(-1);  
    }  
  
}  
  
pthread_exit(NULL);  
}
```

```
[MAIN] Creating thread, 0  
[MAIN] Creating thread, 1  
[MAIN] Creating thread, 2  
[MAIN] Creating thread, 3  
[MAIN] Creating thread, 4  
[MAIN] Creating thread, 5  
[MAIN] Creating thread, 6  
[THREAD] Hello, Welcome 140721421673000.  
[THREAD] Hello, Welcome 140721421672992.  
[THREAD] Hello, Welcome 140721421672976.  
[THREAD] Hello, Welcome 140721421673024.  
[THREAD] Hello, Welcome 140721421673008.  
[THREAD] Hello, Welcome 140721421673016.  
[THREAD] Hello, Welcome 140721421672984.  
  
...Program finished with exit code 0  
Press ENTER to exit console.□
```

3. #include <pthread.h>

#include <stdlib.h>

#include <stdio.h>

#include <unistd.h>

struct number {

int a;

int b;

};

void *addition (void *s){

struct number *z = (struct number *)s;

printf("Adding %d and %d gives %d\n",z->a,z->b,z->a + z->b);

pthread_exit(NULL);

}

int main(){

int result;

pthread_t threads[5];

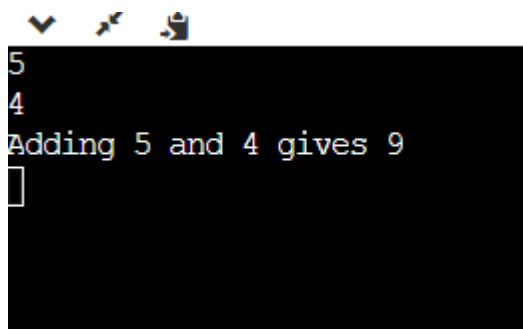
struct number k[5];

for (int i = 0; i < 5; i++){

```
scanf("%d", &k[i].a);
scanf("%d", &k[i].b);
result = pthread_create(&threads[i], NULL, addition,&k[i]);

if (result) {

    printf("Error in creating thread, %d ", result);
    exit(-1);
}
pthread_exit(NULL);
}
```

A terminal window with a black background and white text. It shows the input '5' and '4' on separate lines, followed by the output 'Adding 5 and 4 gives 9'. A cursor is visible on the line following the output.

```
5
4
Adding 5 and 4 gives 9
█
```